The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Ex parte ARTHUR FRANCIS CHAMPERNOWNE

Appeal No. 2006-1033
Application 09/825,451

HEARD: May 25, 2006

Before FRANKFORT, OWENS and LEVY, *Administrative Patent Judges.*

OWENS, *Administrative Patent Judge.*

DECISION ON APPEAL

This appeal is from a rejection of claims 1-36, which are all of the pending claims.

THE INVENTION

The appellant claims a communications network, computer readable medium and query server apparatus for finding at least one best fare for a trip. Claim 1, which claims the communications network, is illustrative:

> In a communications network including a client and a query server computer, a method-for finding at least one best fare for a trip, the method comprising:

at the query server computer, in response to a fare query received from the client application:

determining a set of partial fare solutions for the trip;

adding trip information to the partial fare solutions in order to define a set of complete fare solutions for the trip;

as trip information is added to the partial fare solutions, eliminating partial fare solutions that are non-optimal partial solutions; and

returning a subset of said complete fare solutions as the best fares for the trip.

THE REFERENCES

DeMarcken et al. (DeMarcken)	6,295,521	Sep. 25, 2001 (filed Jul. 2, 1998)
Zhang et al. (Sabre) (PCT application)	WO 01/29693 A2	Apr. 26, 2001[1]

THE REJECTIONS

The claims stand rejected as follows: claims 1, 3, 9, 10, 13, 15, 21, 22, 25, 27, 33 and 34 under 35 U.S.C. § 102(e) as anticipated by DeMarcken; claims 2, 14 and 26 under 35 U.S.C. § 103 as obvious over DeMarcken; and claims 4-8, 11, 12, 16-20, 23, 24,

[1] Because Sabre's April 26, 2001 publication date is after the appellant's April 2, 2001 filing date, Sabre is not prior art. Sabre relies for priority upon U.S. patent application no. 09/421,895, which is still pending. Because the October 21, 1999 filing date of that application is before November 29, 2000, the application was not published 18 months after filing. *See* Manual of Patent Examining Procedure § 1120(I)(8th ed., rev. 2, May 2004). Consequently, Sabre's U.S. priority application is not available as prior art.

28-32, 35 and 36 under 35 U.S.C. § 103 as obvious over DeMarcken in view of Sabre.

OPINION

We affirm the rejections of all claims except claims 7, 19 and 31.

We address the claims as grouped by the appellant, and separately discuss claims within those groups to the extent justified by the appellant's arguments. *See* 37 CFR § 41.37(c)(1)(vii)(2004).

Rejection of claims 1, 3, 9, 10, 13, 15, 21, 22, 25, 27, 33 and 34 under 35 U.S.C. § 102(e) over DeMarcken

Claims 1, 9, 10, 13, 21, 22, 25, 33 and 34

DeMarcken discloses an airline travel planning system wherein a scheduler process (16) provides itineraries to a faring process (18) which produces a set of pricing solutions (38), and then an availability system (58) uses an airline inventory database (20b) as a filter to remove from the set of pricing solutions those pricing solutions for which seats are unavailable (col. 5, lines 1-12).

The appellant argues that DeMarcken's scheduler process uses computer reservation systems to produce the itineraries, and that computer reservation systems provide complete travel solutions (brief, pages 16-17 and 21; reply brief, pages 5-9). DeMarcken's

itineraries are only part of the itineraries that can be provided by a computer reservation system and, therefore, are partial solutions. Hence, DeMarcken's itineraries to which fares have been applied are partial fare solutions.

The appellant argues that DeMarcken does not add trip information to partial fare solutions in order to define a set of complete fare solutions for a trip and, as trip information is added, eliminate non-optimal partial fare solutions (brief, pages 17-20). DeMarcken's availability system adds trip information, i.e., seat availability, to the partial fare solution, thereby providing a complete fare solution, i.e., a solution that includes all of the itineraries in the partial fare solution for which seats are available. As the seat availability trip information is added, non-optimal solutions, i.e., itineraries for which seats are not available, are eliminated.

We therefore are not convinced of reversible error in the examiner's rejection of claims 1, 9, 10, 13, 21, 22, 25, 33 and 34. Also, the appellant does not provide a substantive argument as to the separate patentablity of claims 11 and 12 which depend from claim 1, claims 23 and 24 which depend from claim 13, and claims 35 and 36 which depend from claim 25 (brief, page 23). Each of claims 11, 12, 23, 24, 35 and 36, therefore, falls with the claim from which it depends.

Claims 3, 15 and 27

The appellant argues that DeMarcken does not return to the customer a predetermined number of lowest cost fare solutions (brief, page 20). DeMarcken's disclosure that the solutions sent to the client system are pricing solutions (col. 5, lines 18-20) indicates that the solutions are arranged according to price. Consequently, whether the lowest cost solutions are among a small number of solutions that appear on a single screen, or are among a larger number of solutions and appear on one of multiple screens, DeMarcken returns to the customer a predetermined number (i.e., the number of solutions selected to be shown on one screen) of lowest cost fare solutions.

Consequently, we are not convinced of reversible error in the examiner's rejection of claims 3, 15 and 27.

Claims 2, 14 and 26

The appellant argues that DeMarcken does not disclose adding trip information by supplying a fare query to a root node in a solution tree, assigning fare components corresponding to the root node to a plurality of first nodes, assigning at least one carrier corresponding to the first nodes to a plurality of second nodes, assigning at least one flight corresponding to the second nodes to a plurality of third nodes, assigning at least one priceable unit corresponding to the third nodes to a plurality of fourth nodes, and

assigning at least one fare corresponding to the fourth nodes to a plurality of leaf nodes (brief, pages 21-22; reply brief, page 10). DeMarcken does not disclose the specific order of assignment of fares, carriers and flights recited in the appellant's claims 2, 14 and 26. However, DeMarcken's disclosures that the flights and fares are nodes in a data structure and that the nodes include non-terminal nodes containing fares and itineraries, and terminal nodes used to hold pricing objects (col. 1, lines 57-62; col. 2, lines 39-43; col. 5, lines 37-41; col. 6, lines 34-36 and 39-43), would have fairly suggested, to one of ordinary skill in the art, assigning fare components and flights to the non-terminal nodes in the desired order, such as that recited in the appellant's claims 2, 14 and 26, and fares to the terminal nodes (which correspond to the appellant's leaf nodes).

Thus, we are not convinced of reversible error in the examiner's rejection of claims 2, 14 and 26.

Claims 4, 16 and 28

The appellant argues that DeMarcken does not disclose a subset of complete fare solutions that is an exhaustive set of the complete fare solutions (brief, page 24). The pricing solutions provided by DeMarcken to the consumer include all of the partial fare solutions for which seats are available (col. 5, lines 18-20). That subset of the partial fare solutions is an exhaustive set of the complete fare

solutions, i.e., the pricing solutions for which seats are available.

Consequently, we are not convinced of reversible error in the examiner's rejection of claims 4, 16 and 28.

Claims 5, 17 and 29

The appellant argues that DeMarcken does not disclose adding trip information and eliminating partial fare solutions in a recursive manner (brief, pages 24-25). "Recursive" means "of, relating to, or constituting a procedure that can repeat itself indefinitely or until a specified condition is met".[2] DeMarcken's availability system (58) uses the airline inventory database (20b) as a filter until each pricing solution for which seats are unavailable has been removed (col. 5, lines 10-13). Because this process is repeated until a specified condition is met, i.e., all of the pricing solutions for which seats are unavailable have been removed, it is performed in a recursive manner.

Therefore, we are not convinced of reversible error in the examiner's rejection of claims 5, 17 and 29.

Claims 6, 18 and 30

The appellant argues that DeMarcken does not disclose adding trip information and eliminating partial fare solutions in an iterative manner (brief, page 25). "Iterative" means "relating to

[2] Webster's New Collegiate Dictionary 967 (G. & C. Merriam, 1973).

or being a computational procedure in which replication of a cycle of operations produces results which approximate the desired result more and more closely".[3] As DeMarcken's process of removing pricing solutions for which seats are unavailable proceeds, the desired result of removing the pricing solutions for which seats are unavailable is approximated more and more closely. Thus, that process is performed in an iterative manner.

Hence, we are not convinced of reversible error in the examiner's rejection of claims 6, 18 and 30.

Claims 7, 19 and 31

DeMarcken discloses that the server process eliminates partial fare solutions based upon seat unavailability (col. 5, lines 10-13). The examiner has not explained how DeMarcken discloses, or would have fairly suggested, to one of ordinary skill in the art, eliminating partial fare solutions based upon a threshold cost.[4]

The examiner, therefore, has not established a prima facie case of obviousness of the methods claimed in claims 7, 19 and 31.

Claims 8, 20 and 32

The appellant argues that DeMarcken does not eliminate partial fare solutions based on a refined lower bound (brief, page 27). The

[3] Webster's, *supra* note 2, at 615.
[4] As pointed out above, Sabre, which is relied upon by the examiner as disclosing eliminating partial fare solutions based upon a threshold cost (answer, page 9), is not prior art.

term "refined lower bound" is sufficiently broad to encompass DeMarcken's lower bound of availability of at least one seat.

Consequently, we are not convinced of reversible error in the examiner's rejection of claims 8, 20 and 32.

DECISION

The rejections of claims 1, 3, 9, 10, 13, 15, 21, 22, 25, 27, 33 and 34 under 35 U.S.C. § 102(e) over DeMarcken, and claims 2, 14 and 26 under 35 U.S.C. § 103 over DeMarcken, are affirmed. The rejection of claims 4-8, 11, 12, 16-20, 23, 24, 28-32, 35 and 36 under 35 U.S.C. § 103 over DeMarcken in view of Sabre is affirmed as to claims 4-6, 8, 11, 12, 16-18, 20, 23, 24, 28-30, 32, 35 and 36, and reversed as to claims 7, 19 and 31.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a)(1)(iv).

AFFIRMED-IN-PART

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